

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-108 (cancelled).

109-140 (cancelled).

141 (currently amended). A **method** of effecting qualitative and/or quantitative changes in the surface antigens expressed by a cell or multi-cellular structure including the step:

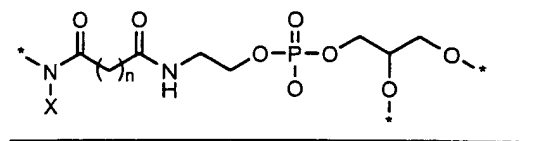
- Contacting a suspension of the cell or multi-cellular structure with a water soluble-synthetic membrane anchor or synthetic molecule construct of the structure F-S₁-S₂-L for a time and at a temperature sufficient to effect the qualitative and/or quantitative change in the surface antigens expressed by the cell or multi-cellular structure;

where:

F is selected from the group consisting of carbohydrates,

S₁-S₂ is a spacer linking F to L; and

L is a lipid selected from the group consisting of diacyl- and dialkyl-glycerolipids, including glycerophospholipids; and sphingosine derived diacyl- and dialkyl-lipids, including ceramide the synthetic membrane anchor or synthetic molecule construct includes the substructure:



where $n = 3$ to 5 , X is H or C , and $*$ is other than H .

142 (previously presented). The method according to claim 141 where the cell or multi-cellular structure is of human or murine origin.

143 (previously presented). The method according to claim 141 where the concentration of the water soluble synthetic membrane anchor or synthetic molecule construct in the suspension is in the range 0.1 to 10 mg/mL.

144 (previously presented). The method according to 141 where the suspension of the cell or multi-cellular structure is contacted with the water soluble synthetic membrane anchor or synthetic molecule construct at a temperature in the range 2 to 37 °C.

145 (previously presented). The method according to claim 144 where the suspension of the cell or multi-cellular structure is contacted with the solution of the water soluble synthetic membrane anchor or synthetic molecule construct at a temperature in the range 2 to 25 °C.

146 (previously presented). The method according claim 145 where the suspension of the cell or multi-cellular structure is contacted with the solution of the water soluble synthetic membrane anchor or synthetic molecule construct at a temperature in the range 2 to 4 °C.

147 (previously presented). The method according to claim 141 where F is selected from the group of glycotopes comprising the terminal sugars GalNAc α 1-3(Fuc α 1-2)Gal β ; Gal α 1-3Gal β ; Gal β ; Gal α 1-3(Fuc α 1-2)Gal β ; NeuAc α 2-3Gal β ; NeuAc α 2-6Gal β ; Fuc α 1-2Gal β ; Gal β 1-4GlcNAc β 1-6(Gal β 1-4GlcNAc β 1-3)Gal β ; Fuc α 1-2Gal β 1-4GlcNAc β 1-6(Fuc α 1-2Gal β 1-4GlcNAc β 1-3)Gal β ; Fuc α 1-2Gal β 1-4GlcNAc β 1-6(NeuAc α 2-3Gal β 1-4GlcNAc β 1-3)Gal β ; NeuAc α 2-3Gal β 1-4GlcNAc β 1-6(NeuAc α 2-3Gal β 1-4GlcNAc β 1-3)Gal β ; Gal α 1-4Gal β 1-4Glc; GalNAc β 1-3Gal α 1-4Gal β 1-4Glc; GalNAc α 1-3GalNAc β 1-3Gal α 1-4Gal β 1-4Glc; or GalNAc β 1-3GalNAc β 1-3Gal α 1-4Gal β 1-4Glc.

148 (previously presented). The method according to claim 147 where F is selected from the group of glycotopes consisting of the oligosaccharides GalNAc α 1-3(Fuc α 1-2)Gal β and Gal α 1-3(Fuc α 1-2)Gal β .

149 (cancelled).

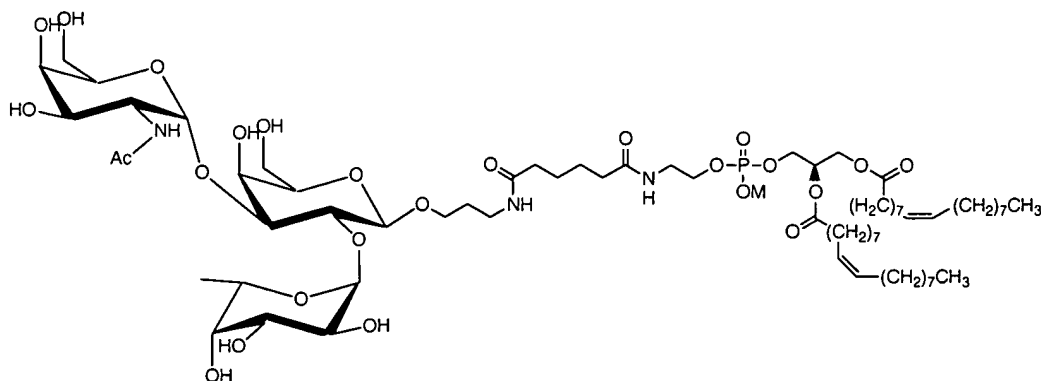
150 (currently amended). The method according to claim 149 where when F is

a glycotope, ~~L is a glycerophospholipid~~ and S_2 is selected from the group including: -
 $\text{CO}(\text{CH}_2)_3\text{CO}-$, $-\text{CO}(\text{CH}_2)_4\text{CO}-$ (adipate), $-\text{CO}(\text{CH}_2)_5\text{CO}-$, and -
 $\text{CO}(\text{CH}_2)_5\text{NHCO}(\text{CH}_2)_5\text{CO}-$.

151 (previously presented). The method according to claim 150 where S_1 is
a C_{3-5} -aminoalkyl selected from the group consisting of: 3-aminopropyl, 4-aminobutyl, or
5-aminopentyl.

152 (previously presented). The method according to claim 151 where S_1 is
3-aminopropyl.

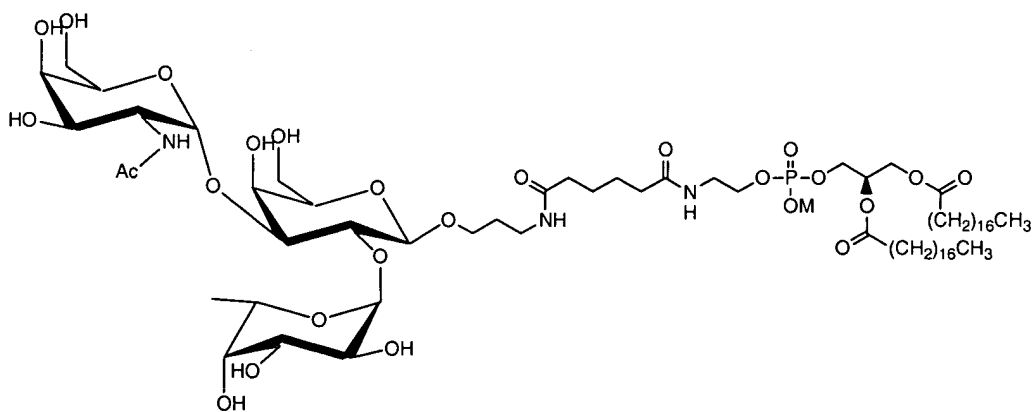
153 (previously presented). The method according to claim 141 where the
synthetic membrane anchor or synthetic molecule construct is:



designated $A_{\text{tri-sp-Ad-DOPE}}$ (I) and M is typically H, but may be replaced by
another monovalent cation such as Na^+ , K^+ or NH_4^+ .

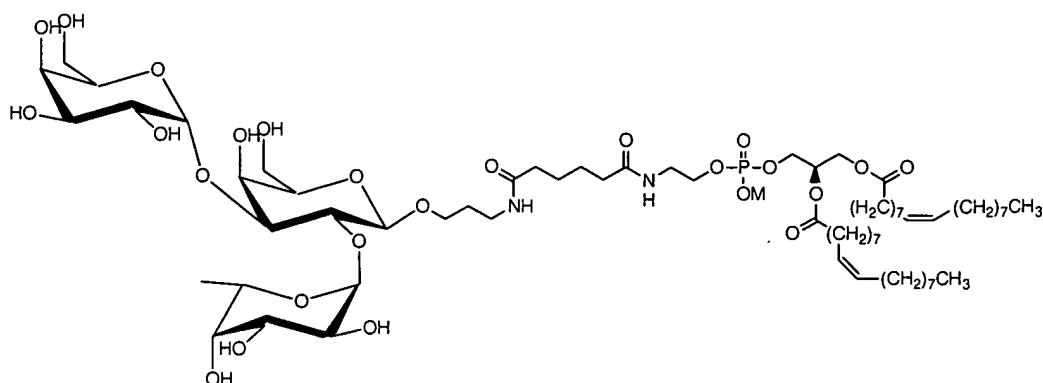
154 (cancelled).

155 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



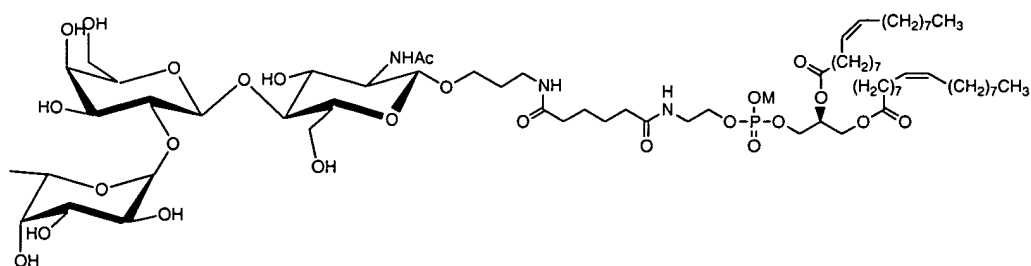
designated A_{tri}-sp-Ad-DSPE (III) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

156 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



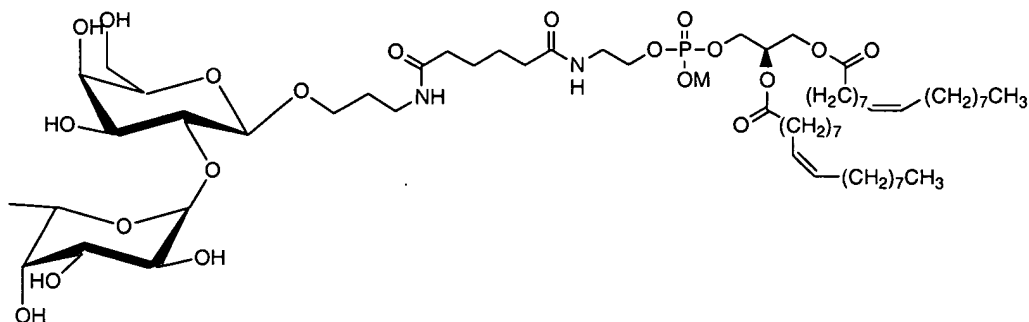
designated B_{tri}-sp-Ad-DOPE (VI) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

157 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



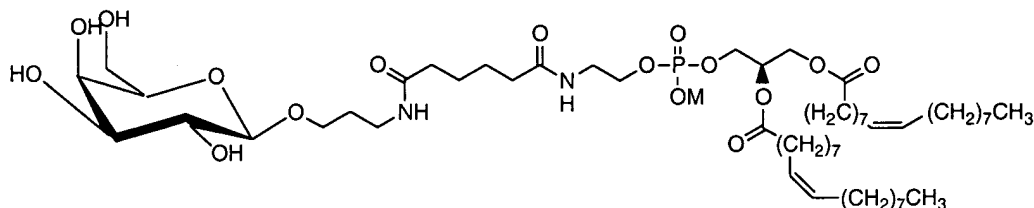
designated H_{tri}-sp-Ad-DOPE (VII) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

158 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



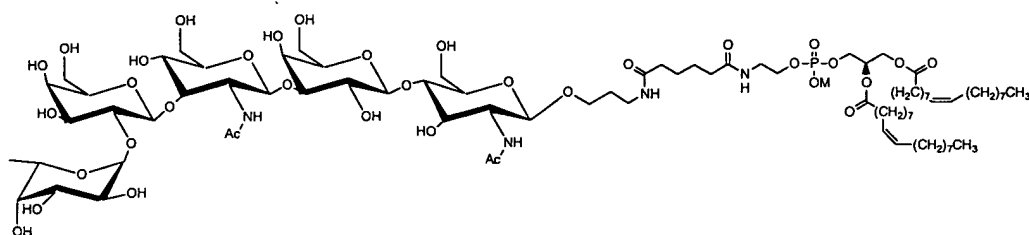
designated H_{di}-sp-Ad-DOPE (VIII) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

159 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



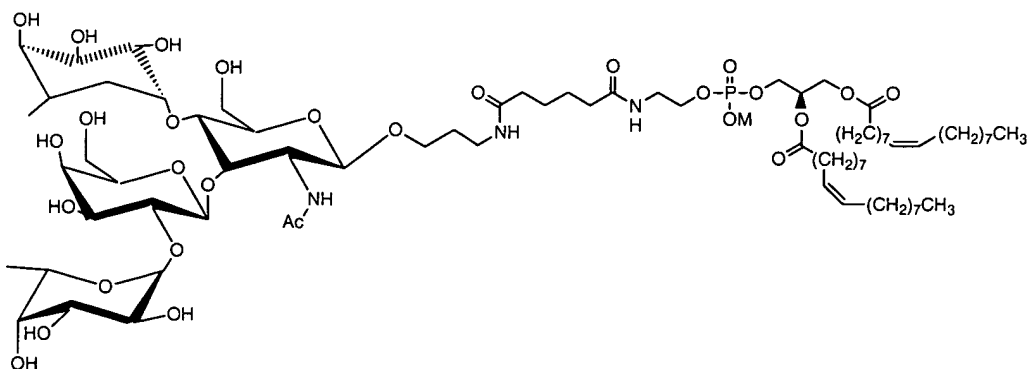
designated Galβi-sp-Ad-DOPE (IX) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

160 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



designated Fuca1-2Gal β 1-3GlcNAc β 1-3Gal β 1-4GlcNAc-sp-Ad-DOPE (XII) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

161 (previously presented). The method according to claim 141 where the synthetic membrane anchor or synthetic molecule construct is:



designated Fuca1-2Gal β 1-3(Fuca1-4)GlcNAc-sp-Ad-DOPE (XIII) and M is typically H, but may be replaced by another monovalent cation such as Na⁺, K⁺ or NH₄⁺.

162 (previously presented). The method according to claim 141 where the

cell or multi-cellular structure is an embryo.

163 (previously presented). The method according to claim 162 where F is an attachment molecule where the attachment molecule has an affinity for a component expressed on the epithelial cells or the extra-cellular matrix of the endometrium.

164 (previously presented). The method according to claim 163 where the component expressed on the epithelial cells or the extra-cellular matrix of the endometrium can be a naturally expressed component or an exogenously incorporated component.

165 (previously presented). The method according to claim 141 where the cell or multi-cellular structure is a red blood cell.

166 (previously presented). The method according to claim 165 where F is a ligand for a binding molecule where the presence of the binding molecule is diagnostic for a pathological condition.

167 (previously presented). The method according to claim 166 where F is a ligand for an antibody (immunoglobulin).